MEN-5428

Managed Layer 2 Access Gigabit Ethernet Switch

24-port 10/100/1000Base-T + 4 Gigabit Combo Ports

Description

The MEN-5428 is a high port density managed access switch designed to deliver Gigabit Ethernet speeds with exceptional performance for high density subscriber base with high ARPU. A variety of traffic-shaping QoS mechanisms and rich software features of the MEN-5428 increase overall efficiency and reliability of the network. Easy-to-use management and monitoring capabilities significantly reduces IT overhead by eliminating the need to manually configure policies on the switch, saving valuable time and effort, and avoids unnecessary OPEX.

The switch is equipped with 24 multi-rate (10/100/1000Mbps) copper and 4 Gigabit Combo ports to deliver multi-rate transmission speeds for enterprise and FTTX networks. Using its Fiber ports, the MEN-5428 quickly uplinks to the aggregation switches in the network to provide high bandwidth uplinks over variable distances. Thereby, service providers can take advantage of the switch's high port density to extend their reach within metro areas and also offer high-speed connectivity to their subscribers.

Features Highlight

Faster Data Transmissions

Providing faster data transmissions over the network is no longer a difficult task to service providers. The MEN-5428 offers a best solution to improve the responsiveness of applications and increase file transfer speeds with its features that deliver high performance. Its high port density provides a 56Gbps non-blocking switching capacity that reduces transmission bottlenecks and increases the bandwidth. Service providers can create a high-performance network infrastructure using the MEN-5428 and fuel their businesses.

Multicast Video Service Support

Deploying multicast applications such as IPTV has never been easier than before with comprehensive multicast traffic functions, IGMP snooping and MVR, in the MEN-5428. IGMP snooping regulates multicast traffic in a given VLAN and MVR operates with hosts on different VLANs in a Layer 2 network. These features on isolate the multicast streams and significantly reduce traffic from streaming media and other bandwidth-intensive IP multicast applications for better bandwidth. Thereby, the MEN-5428 supports applications that use multi-traffic in large scale across the network, saves network bandwidth, reduces operational burden and enhances the overall network performance.

Comprehensive QoS Mechanisms to Assign Priority

Network applications need different levels of services delivered to them reliably without any transmission delays and interruptions. The MEN-5428 has comprehensive QoS mechanisms that assign priority to applications and send only specific dedicated traffic to them. In addition, bandwidth management functions of the switch allocate greater bandwidth for mission-critical communications. With increased control, administrators can prevent unpredictable errors and utilize the bandwidth more effectively.

Robust Network Security

The MEN-5428 implements complete Layer 2 to Layer 4 ACLs to restrict access to your sensitive network resources by filtering specific packets based on TCP/UDP ports, source and destination IP addresses or particular network devices. Furthermore, DHCP snooping, ARP, IEEE 802.1X and Port Security provide additional tools to manage access and levels of use of network. These defence mechanisms of the MEN-5428 deliver robust network security and enables service providers to offer more stable services on a more secure network.

Efficient Network Monitoring and Management Tools

Issues that impact network performance can be quickly identify with enhanced traffic management, monitoring and analysis tools including SNMP and RMON. Designed to improve management efficiency, SNMP allows end users to centrally manage different levels in a network and RMON gives the capability to monitor the network performance. Service providers can ensure a reliable network by identifying connectivity and performance issues, and isolating the problem remotely on individual switches. This avoids high OPEX and manage a healthy and efficient network.

Features Highlight

Fine-grained Service Management

Beside basic port-based VLAN function, the MEN-5428 provides higher and flexible levels of VLAN configuration related to MAC and Protocol-based. While MAC-based comprises of defining a virtual network according to the MAC addresses of stations, the Protocol-based VLAN makes it possible to create a virtual network by protocol type. These features along with VLAN stacking enable ISPs to flexibly deliver services with extra security and separation. As a result, ISPs using the MEN-5428 can experience fine-grained service management fulfilling the requirements of their subscribers.

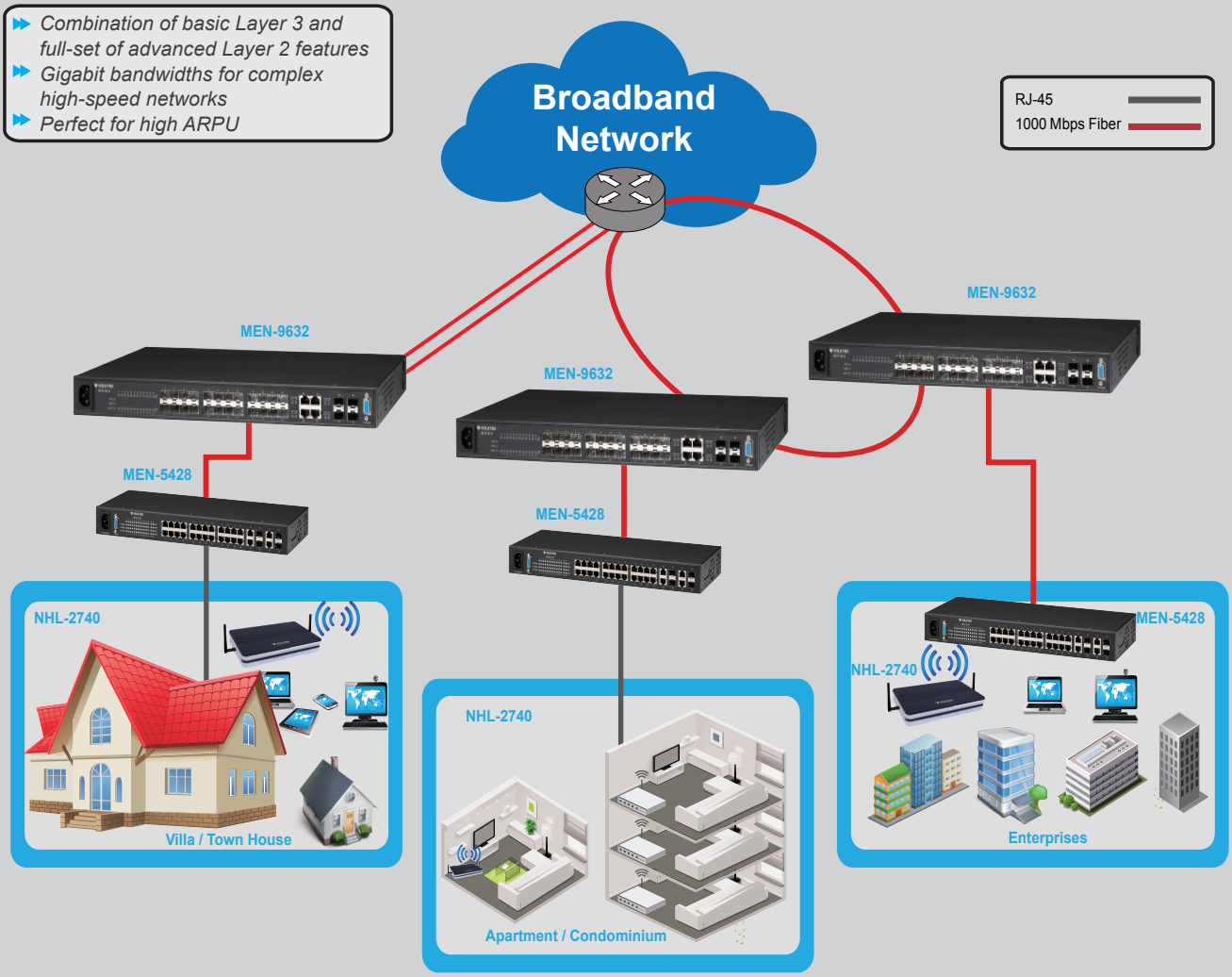
Proprietary Technology Delivers Redundant Ring and Fast Recovery

Even a few seconds of missed communications due to link failures can cause inconvenience, and recovery can become critical. Volktek's proprietary Xpress Ring in MEN-5428 rapidly reacts to such link failures and recovers in less than 50ms, a much faster fail-over time to support nonstop transmissions. This is critical for networks handling heavy video and data traffic. In addition, Dual Homing, LACP and RSTP provide a highly reliable network with redundancy connections whenever required and guarantee continuous network uptime.

Application

Experience superior performance and massive bandwidths that deliver remarkable quality services

- *Combination of basic Layer 3 and full-set of advanced Layer 2 features*
- *Gigabit bandwidths for complex high-speed networks*
- *Perfect for high ARPU*



Aggregation Level
MEN-9632: 24-slot Gigabit Multi-rate SFP,
4-Gigabit Combo ports Managed L3 Aggregation Switch

Access Level
MEN-5428: 24-port 10/100/1000Base-T,
4 Gigabit Combo port Managed Access Switch

CPE
NHL-2740: 1-slot Gigabit Multirate SFP, 1 RJ-45 ports,
1 3G/4G-LTE port, 4 ports 10/100/1000 LAN, Wireless Router

Specifications

Features	
Enhanced Function	**Network Management**
Hardware Monitor IC	Local Console
Surge Protector 6KV	Telnet and CLI
Dying Gasp	Web-based GUI
Alarm LED	SNMP v1/v2c
Code Redundancy	SNMP Trap
MSTP	RMON (1, 2, 3, 9)
Xpress Ring	Port Mirroring
Dual Homing	Firmware Upgradeable
Protocol-based VLAN	via Auto-Provisioning
MAC-based VLAN	Configuration Backup/Restore
IP subnet-based VLAN	Port configuration, status, statistics
GARP/GVRP	**User Security**
VLAN Trunking	Port Isolation
MVR, Device Lock	Static MAC forwarding
MAC-based 802.1x	Port Security
IGMP Statistics/Group Filter	ACL (L2/L3/L4)
IGMP Message Filter/Throttling	BPDU Guard/Filter
DHCP Relay/Option 82	DHCP Snooping
Syslog of Hardware Monitor	802.1x Support
Auto-Provisioning	HDoS, ARP Inspection
Network Function	MAC Anti-spoofing
LACP Support/Static Link Trunking	**Traffic Management and QoS**
STP/RSTP	Tag-based VLAN/Port-based VLAN
Loop Detection/Autorecovery timer	Active VLAN Support 4K
Multicast VLAN Registration	8 Hardware Queues
Traffic Monitor/Autorecovery timer	SP/WRR
VLAN Stacking (Q in Q)	Storm Control
Network Storm Protection	Rate Limiting
IGMP Snooping	802.1p/DSCP/ToS Support
SFP DDMI support	Management VLAN

Maximum Distances	
Copper	100 m
Console	15 m
SFP	Up to 110 Km

Performance	
Throughput	14,880 pps to 10 Mbps ports
	148,800 pps to 100 Mbps ports
	1,488,000 pps to 1000 Mbps ports
Switch Fabric	56Gbps
L2 Forwarding	41.7Mpps
MAC Table Size	16K
Packet buffer size	8Mbit
Jumbo Frame Size	10K

Standards	
IEEE 802.3	10Base-T
IEEE 802.3u	100Base-TX
IEEE 802.3ab	1000Base-T
IEEE 802.3z	1000Base-SX/LX
IEEE 802.3x	Flow Control
IEEE 802.3ad	Link Aggregation
IEEE 802.1d	STP
IEEE 802.1w	RSTP
IEEE 802.1p	CoS Prioritization
IEEE 802.1q	VLAN Tagging
IEEE 802.1x	Port Authentication
IEEE 802.1ab	LLDP
IEEE 802.3	N-way Auto Negotiation

Power	
Input Voltage	100~240V AC, 15V DC optional
	12VDC Battery Back-up
Power Consumption	20W (w/o Battery)

Ports	
Ports	24 x 10/100/1000Mbps (RJ-45)
	4 x GbE Combo
	1 x RS-232 Console (DB-9, female)

Mechanical and Environment	
Operating Temperature	0°C~50°C
Storage Temperature	-20°C~70°C
Operating Humidity	10 to 80% RH (non-condensing)
Storage Humidity	5 to 90% RH (non-condensing)
Weight	2.3kg
Dimensions	440x44x180mm (WxHxD)

Ordering Information	
MEN-5428	24-port 10/100/1000Base-T + 4 Gigabit Combo ports Managed Layer 2 Access Switch
GBM-104	Gigabit Multi-mode SFP Module
GBM-123	Gigabit Bi-di Single Mode SFP Module

**Specifications subject to change without notice.*

Dimension